

Claim Amendments

Claim 1 (currently amended): A method of managing configuration information of a network device of a network having a plurality of devices, comprising:

at the network device, (1) maintaining running configuration information of the network device, where the configuration information includes how the devices are connected to each other, the capacities and relative utilization of communication links of the network among the devices and faults and problems on the network, (2) changing the running configuration information in response to (i) configuration change requests received from a network management system at a first interface and (ii) configuration change requests received from outside the network management system at a second interface, and (3) in response to receiving an upload configuration request from the network management system, transferring a configuration file containing the running configuration information to the network management system; and

at the network management system, (1) maintaining a database including configuration information for the network device, the configuration information potentially being outdated due to the configuration change requests received by the network device at the second interface, and (2) under predetermined conditions, (i) sending an upload configuration

request to the network device and subsequently receiving the configuration file from the network device, and (ii) updating the configuration information in the database using the contents of the configuration file.

Claim 2 (original): A method according to claim 1, wherein the second interface includes a command line software interface.

Claim 3 (original): A method according to claim 2, wherein the second interface includes a dial-up connection.

Claim 4 (original): A method according to claim 1, wherein the configuration file has an extensible format.

Claim 5 (original): A method according to claim 4, wherein the format of the configuration file employs extensible markup language.

Claim 6 (original): A method according to claim 1, wherein the network management system includes a network management client communicatively coupled to a network management server.

Claim 7 (original): A method according to claim 1, wherein the network management system includes a network management client communicatively coupled to a network management server, and wherein the sending of the upload configuration request and the updating of the information in the database occur at the network management server in response to the receipt of a synchronization request from the network management client.

Claim 8 (original): A method according to claim 7, further comprising sending an update event from the network management server to the network management client in response to the receipt of the synchronization request, and responding to the update event at the network management client by updating a user display to indicate that a synchronization operation with respect to the network device is in progress.

Claim 9 (original): A method according to claim 7, further comprising sending a refresh event from the network management server to the network management client upon updating the information in the database, and responding to the refresh event at the network management client by updating a user display with updated configuration information for the network device.

Claim 10 (original): A method according to claim 7, further comprising sending a status report from the network management server to the network management client

upon receiving the configuration file from the network device and updating the information in the database, the status report indicating to the network management client that the synchronization request has been successfully carried out.

Claim 11 (original): A method according to claim 7, wherein the network management client includes a graphical user interface, and wherein the synchronization request is sent from the network management client to the network management server in response to a user's activation of a control object on the graphical user interface.

Claim 12 (original): A method according to claim 11, wherein the control object comprises a push button.

Claim 13 (original): A method according to claim 11, wherein the control object comprises a selectable menu item.

Claim 14 (original): A method according to claim 7, wherein the sending of the upload configuration request and the updating of the information in the database also occur at the network management server in response to the receipt of a trap message from the network device.

Claim 15 (original): A method according to claim 14, wherein the trap message is sent upon power-up of the network device.

Claim 16 (original): A method according to claim 1, wherein the network device includes functional features for supporting virtual routed networks, and wherein the configuration information includes information pertaining to at least one specific virtual routed network supported by the network device.

Claim 17 (original): A method according to claim 1, wherein the sending of the upload configuration request and the updating of the information in the database occur in response to the receipt by the network management system of a message from the network device.

Claim 18 (original): A method according to claim 17, wherein the message from the network device comprises a trap message.

Claim 19 (original): A method according to claim 1, further comprising:

at the network device, saving the running configuration information in response to save requests received from the network management system; and

at the network management system, under predetermined conditions, sending a save request to the network device.

Claim 20 (currently amended): A network having a plurality of devices, comprising:

a network device being operative (1) to maintain running configuration information of the network device, where the configuration information includes how the devices are connected to each other, the capacities and relative utilization of communication links of the network among the devices and faults and problems on the network, (2) to change the running configuration information in response to (i) configuration change requests received at a first interface and (ii) configuration change requests received at a second interface, and (3) in response to receiving an upload configuration request at the first interface, to transfer a configuration file containing the running configuration information to the source of the request via the first interface; and

a network management system coupled to the network device via the first interface, the network management system being operative (1) to maintain a database including configuration information for the network device, the configuration information potentially being outdated due to the configuration change requests received by the network device at the

second interface, and (2) under predetermined conditions, (i) to send an upload configuration request to the network device and to subsequently receive the configuration file from the network device, and (ii) to update the configuration information in the database using the contents of the configuration file.

Claim 21 (original): A network according to claim 20, wherein the network device provides a command line software interface at the second interface.

Claim 22 (original): A network according to claim 21, wherein the second interface includes a dial-up connection.

Claim 23 (original): A network according to claim 20, wherein the configuration file has an extensible format.

Claim 24 (original): A network according to claim 23, wherein the format of the configuration file employs extensible markup language.

Claim 25 (original): A network according to claim 20, wherein the network management system includes a network management client communicatively coupled to a network management server.

Claim 26 (original): A network according to claim 20, wherein the network management system includes a network management client communicatively coupled to a network management server, and wherein the sending of the upload configuration request and the updating of the information in the database occur at the network management server in response to the receipt of a synchronization request from the network management client.

Claim 27 (original): A network according to claim 26, wherein the network management server is further operative to send an update event to the network management client in response to the receipt of the synchronization request, and wherein the network management client is further operative to respond to the update event by updating a user display to indicate that a synchronization operation with respect to the network device is in progress.

Claim 28 (original): A network according to claim 26, wherein the network management server is further operative to send a refresh event to the network management client upon updating the information in the database, and wherein the network management client is further operative to respond to the refresh event by updating a user display with updated configuration information for the network device.

Claim 29 (original): A network according to claim 26, wherein the network management server is further operative to send a status report to the network management client upon receiving the configuration file from the network device and updating the information in the database, the status report indicating to the network management client that the synchronization request has been successfully carried out.

Claim 30 (original): A network according to claim 26, wherein the network management client includes a graphical user interface, and wherein the synchronization request is sent from the network management client to the network management server in response to a user's activation of a control object on the graphical user interface.

Claim 31 (original): A network according to claim 30, wherein the control object comprises a push button.

Claim 32 (original): A network according to claim 30, wherein the control object comprises a selectable menu item.

Claim 33 (original): A network according to claim 26, wherein the network management server is further operative to send the upload configuration request and to update

the information in the database in response to the receipt of a trap message from the network device.

Claim 34 (original): A network according to claim 33, wherein the trap message is sent upon power-up of the network device.

Claim 35 (original): A network according to claim 20, wherein the network device includes functional features for supporting virtual routed networks, and wherein the configuration information includes information pertaining to at least one specific virtual routed network supported by the network device.

Claim 36 (original): A network according to claim 20, wherein the network management system is further operative to send the upload configuration request and to update the information in the database in response to the receipt of a message from the network device.

Claim 37 (original): A network according to claim 36, wherein the message from the network device comprises a trap message.

Claim 38 (original): A network according to claim 20, wherein:

the network device is further operative to save the running configuration information in response to save requests received from the network management system; and

the network management system is further operative to send a save request to the network device under predetermined conditions.